

What is claimed is:

1. A laundry detergent or cleaning product comprising customary ingredients, further comprising an active substance preparation which has been compounded with an LCST polymer.
2. A laundry detergent or cleaning product, comprising customary active substances and ingredients, in which the active substances have been compounded at least in part with an LCST polymer, wherein a fraction of the active substances has been applied to carrier materials.
3. The laundry detergent or cleaning product as claimed in claim 2, wherein the carrier materials are selected from zeolites, bentonites, silicates, e.g., water glasses, disilicates, carbonates, especially alkali metal carbonates, hydrogen carbonates, sulfates, phosphates, and also synthetic polymers, such as polyethylene glycols, polycarboxylates, crosslinked polycarboxylates, polyvinyl alcohols with different degrees of hydrolysis, or polyvinyl acetate, and organic oligocarboxylic acids which are solid at room temperature.
4. The laundry detergent or cleaning product as claimed in any of claims 1 to 3, wherein the active substance compounded with the LCST polymer remains at least partly unchanged following a heat treatment in a liquid medium in the main wash cycle and, following a temperature reduction, is released subsequent to the heat treatment.
5. The laundry detergent or cleaning product as claimed in any of claims 1 to 4, wherein the

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active substance has been coated with an LCST polymer.

- 5 6. The laundry detergent or cleaning product as claimed in any of claims 1 to 4, wherein the active substance preparation has been embedded in a matrix comprising an LCST substance.
- 10 7. The laundry detergent or cleaning product as claimed in any of claims 1 to 6, wherein the LCST polymer is selected from cellulose derivatives, mono- or di-N-alkylated acrylamides, copolymers of mono- or di-N-substituted acrylamides with acrylamides and/or acrylates and/or acrylic acids, 15 polyvinyl alcohol and copolymers thereof, such as polyvinyl alcohol-vinyl acetate copolymers, polyvinyl methyl ethers, polyvinylcaprolactam, polyvinylpyrrolidone and its copolymers, polyisopropylloxazoline, polyamino acids and/or 20 proteins.
- 25 8. The laundry detergent or cleaning product as claimed in claim 7, wherein the LCST polymer is selected from cellulose ethers, polyisopropylacrylamide, copolymers of polyisopropylacrylamide, and blends of these substances.
- 30 9. The laundry detergent or cleaning product as claimed in any of claims 1 to 8, wherein the lower critical separation temperature of the LCST substance is situated between 20°C and 90°C.
- 35 10. The laundry detergent or cleaning product as claimed in any of claims 1 to 9, wherein the heat treatment is conducted at a temperature between 20°C and 150°C, preferably between 30°C and 90°C.

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11. The laundry detergent or cleaning product as claimed in any of claims 1 to 10, wherein the compounded active substance preparation is coated with a further substance which at a temperature above the lower separation temperature of the LCST substance is soluble or which has a melting point above this temperature or has a retarded solubility in water.
12. The laundry detergent or cleaning product as claimed in claim 11, wherein the further substance is selected from hydrophilic polymers, such as polyvinyl alcohols, polyethylene glycols, water-soluble polysaccharides, water-soluble polyurethanes, xanthan, guar gum, alginates, chitosan, carrageenan, polysulfonates, shellac, polyacrylates and copolymers thereof and also any desired mixtures of the above.
13. The laundry detergent or cleaning product as claimed in any of claims 1 to 12, wherein the active substances, or active substances and carrier material, are coated with the LCST substance.
14. The laundry detergent or cleaning product as claimed in claim 13, wherein the active substances, or active substances and carrier material, have first been coated with a layer of a water-soluble polymer, to which the LCST substance is applied.
15. The laundry detergent or cleaning product as claimed in claim 14, wherein the layer of water-soluble polymer comprises polyvinyl alcohol.
16. The laundry detergent or cleaning product as claimed in any of claims 1 to 15, which is in

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solid to gel form, in the form of a powder, granules, extrudates, single-phase or multiphase tablets, capsule of any desired form, or pouches.

- 5 17. The laundry detergent or cleaning product as
claimed in any of claims 1 to 16, which is a
textile detergent and, as active substances,
comprises textile handle components, enzymes,
10 fragrances, dyes, fluorescence agents, optical
brighteners, shrink preventatives, antcrease
agents, antimicrobial active substances,
germicides, fungicides, antioxidants, antistatics,
easy-iron agents, repellency and impregnating
agents, UV absorbers and any desired mixtures of
15 the above.
18. The laundry detergent or cleaning product as
claimed in any of claims 1 to 16, which is a
machine dishwashing composition and comprises, as
20 active substances and ingredients which have been
compounded with the LCST substance, builders,
cobuilders, acids, such as citric acid,
amidosulfonic acid, citrate, hydrogen sulfate,
surfactants, fragrances, dyes, bleaches,
25 preferably an active chlorine carrier, and
complexing agents, soil repellents, such as
phosphonates, for example, including complexing
surfactants, and also any desired mixtures of the
above, and further customary ingredients.
- 30 19. The laundry detergent or cleaning product as
claimed in claim 18, wherein the active substance
preparation is a particulate rinse aid.
- 35 20. The laundry detergent or cleaning product as
claimed in claim 19, wherein the particulate rinse
aid has particle sizes of between 0.1 and 35 mm,

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preferably between 1.0 and 20 mm, and in particular between 2 and 20 mm.

21. The laundry detergent or cleaning product as
5 claimed in claim 18, which has phases A and B, the
phase(s) A comprising carrier materials and also
the active substances compounded with the LCST
substance.
- 10 22. The laundry detergent or cleaning product as
claimed in claim 21, wherein the phase(s) A
comprise(s) active substances which are released
in a cycle after the actual dishwashing,
preferably in the rinse cycle.
- 15 23. The laundry detergent or cleaning product as
claimed in claim 22, wherein the active substances
are selected from surfactants, especially rinse
aid surfactants, builder/cobuilders, bleaches,
20 bleach activators, corrosion inhibitors, scale
inhibitors, silver protectants, fragrances and
also, if desired, further ingredients in small
amounts.
- 25 24. The laundry detergent or cleaning product as
claimed in any of claims 21 to 23, wherein phase B
is a base tablet comprising customary ingredients
for machine dishwashing compositions.
- 30 25. The laundry detergent or cleaning product as
claimed in any of claims 21 to 24, wherein phase B
comprises a plurality of individual phases which
if desired are visually distinguishable on the
outer face of the tablet.

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